

Operation Instruction for Laser Head with PSU-W-FDA

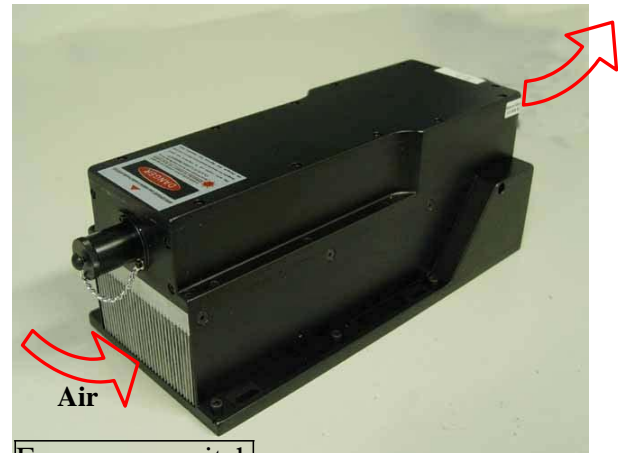
Note: The laser only can be operated after the case temperature of the laser system return to the room temperature to avoid the damage of the big temperature range.

1. Product features

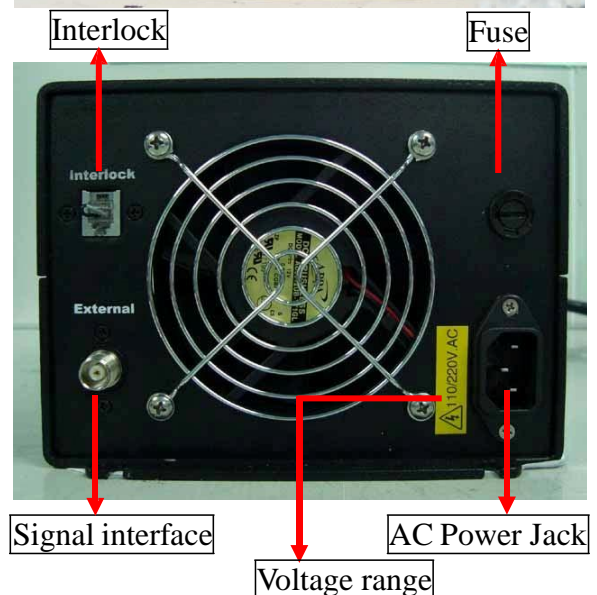
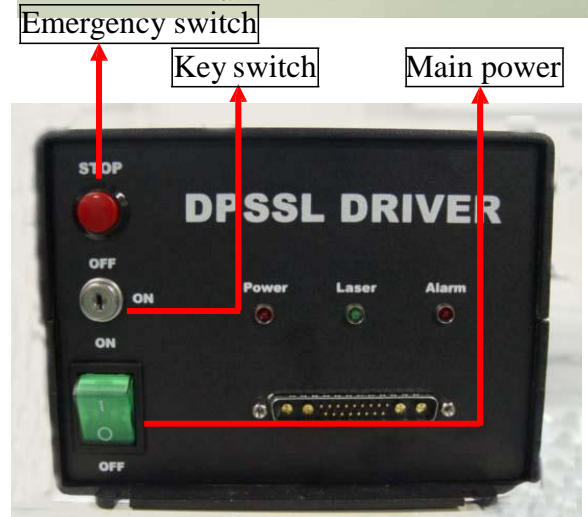
- 1.1. Place the laser head which has the same serial number with the power supply on a stable and better heat-conducting plate, such as metal plate.

Note: The heat-sink at the bottom of laser-head is air duct.

- A. The air duct should not be blocked, and make sure there is nothing placed within 0.05m-0.1m.
- B. If the laser system needs to be installed into equipment, please make sure the airflow clear.
- C. If a cooling fan is needed in the equipment, please make sure the wind direction is the same as right figure.



- 1.2. Check the main power and make sure it is in “OFF” state.
- 1.3. Check the key switch and make sure it is in “OFF” state.
- 1.4. Emergency switch: When unexpected accident occurs, you can press it down to switch off the laser. You need to reset the main power and key switch to restart the laser.
- 1.5. Make sure your local voltage is in the range showed at the back panel.
- 1.6. Interlock: After pulling it out, the laser system will stop working. You need to install the interlock, and then reset the main power and key switch to restart the laser.
- 1.7. TTL or Analogue external control signal interface.
- 1.8. Fuse: if the power supply has no function (fan in the driver doesn't work or the red LED-“power” is off), the most possible problem is the fuse broken. Please note to replace the fuse after switching off the key switch and mains power.



Opto Engine LLC

7397 Balboa Dr. Midvale, Utah 84047 USA

Email: info@OptoEngine.com www.OptoEngine.com

- 1.9. This is modulation cord. The white wire is anode (+), and the other is for cathode (-).



2. Operation

Well noted: Due to the output power of the laser is high, please place a black metal object that is not combustible and doesn't reflect in front of the aperture of the laser. Avoid burning skin and emblazing other objects.

- 2.1. The connector is with the function of protecting. Please remove it when using the laser. (When the laser is not connected with the power supply, please cover it to avoid the damage of the laser).
 - 2.2. Attach the laser head to the connector of power supply firmly. Please make sure to fasten the locking ring on the connector.
 - 2.3. Connect the power cord of the power supply to AC Power Jack.
 - 2.4. Open the shutter.
 - 2.5. Switch on the main power of the power supply. The red LED - "Power" is on.
 - 2.6. The laser start to work after 10 seconds, the green LED-"Laser" is on. The warming up time is about 15minutes
 - 2.7. Only for unexpected accident occurs, the red LED-"Alarm" will be on. That means the laser system works in abnormal state. Please switch off the mains power. Please reset the mains power and key switch after a few minutes, then to restart the laser system again.
 - 2.8. TTL and analogue modulation are optional. As for the TTL or analogue instruction, please refer to the "Notes for TTL Modulation" or "Notes for Analog Modulation".
- Note:** For analog function, you need to input 0-5 VDC input voltage.
- 2.9. Closing the laser system: switch off the mains power of the power supply.
 - 2.10. To prevent optic path from dust, you should close the shutter.



3. Warranty

- 3.1. The warranty is one year from the shipping date.
- 3.2. This warranty will not apply to those products which have been.
 - 3.2.1. Repaired or altered other than in accordance with the terms of this Agreement.
 - 3.2.2. Abused, misused, improper handling in use, or storage, or used in an unauthorized or improper manner or without following written procedures supplied by manufacturer.
 - 3.2.3. Original identification markings or labels have been removed, defaced or altered.
 - 3.2.4. Any other claims not arising directly from material defects in material or workmanship.

4. Laser safety

- 4.1. All lasers and laser light show systems have intrinsic dangers - even laser pointers! Observation of basic laser safety rules and the specific safety regulations of the jurisdiction in which you operate are essential.
- 4.2. Safety with high powered lasers is a critical issue that cannot be overlooked. Despite their brilliant beams and ability to burn, high power laser pointers and portable lasers are only a danger to your eyes. The danger that lasers represent to your eyes though is very serious. The visual receptors in your eyes are part of your central nervous system which means if your eyes are damaged, they do not heal or recover.
- 4.3. As far as power output, laser pointers and portable lasers do not release that much power. Especially not when compared to a normal 75W or 100W light globe. What makes the light from lasers so dangerous is that it has two unique properties.
 - 4.3.1. Coherent and focused. The energy is focused on a very small area similar to the way a magnifying glass focuses the sun.
 - 4.3.2. Collimated. The light does not spread out from a laser; it stays in a focused narrow beam that makes lasers almost as dangerous at a distance as close up.

This not to say you should be afraid of lasers or avoid using them. What you should do however is to treat lasers with respect, be aware of their dangers and follow some basic guidelines to ensure your safety.